

A LAN switch has a backplane matrix in which each controller has a dedicated packet bus for propagating packet data. Each bus has a root interfacing with the transmitting (root) controller and a plurality of leaves interfacing with receiving (leaf) controllers. This configuration enables each controller to simultaneously transmit packet data on the root of a bus and receive packet data off a plurality of leaves of other buses without contention. An efficient filtering and stalling system employed at the receive side of the backplane prevents the highly parallel traffic from causing receive side congestion.

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